

CPC**COOPERATIVE PATENT CLASSIFICATION****B66D****CAPSTANS; WINCHES; TACKLES, e.g. PULLEY BLOCKS; HOISTS**

(winding or unwinding ropes or cables for feeding or storage purposes B65H; rope or cable winding or unwinding mechanisms for lifts B66B)

NOTE

This subclass covers:

rope, cable or chain winding or unwinding mechanisms for moving all loads except lift cages, e.g. winches for dredges;

braking or detent devices characterised by their application for retarding or preventing rotary movement of a winding drum or barrel

WARNING

The following IPC groups are not used in the internal ECLA classification scheme. Subject matter covered by these groups is classified in the following ECLA groups:

[B66D 1/395](#) covered by [B66D 1/36](#), [B66D 1/50](#)

B66D 1/00

Rope, cable, or chain winding mechanisms; Capstans (portable or mobile lifting or hauling appliances [B66D 3/00](#))

B66D 1/005

. {Attaching winches to vehicle wheels}

B66D 1/02

. Driving gear

B66D 1/04

.. manually operated

B66D 1/06

... Safety cranks for preventing unwanted crank rotation and subsequent lowering of the loads

B66D 1/08

.. incorporating fluid motors

B66D 1/10

... Steam driving gear

B66D 1/12

.. incorporating electric motors

B66D 1/14

.. Power transmissions between power sources and drums or barrels {including brakes, one-way brakes, one-way clutches, clutches activated alternately with brakes, fixed ratio gearing unless otherwise provided for in [B66D 1/16](#) to [B66D 1/24](#)}

B66D 1/16

... the drums or barrels being freely rotatable { e.g. having a clutch activated independently of a brake ([B66D 1/20](#), [B66D 1/22](#), [B66D 1/24](#) take precedence; clutches activated alternately with brakes [B66D 1/14](#), slip couplings [B66D 1/14](#))}

B66D 1/18

.... and the power being transmitted from a continuously operating and irreversible prime mover {i.e. an internal combustion engine e.g. on a motor vehicle or a portable winch}

B66D 1/20

... Chain, belt, or friction drives, e.g. incorporating sheaves {of fixed or variable ratio}

B66D 1/22

... Planetary or differential gearings (for actuating grab buckets [B66D 1/70](#)){i.e.

- with planet gears having movable axes of rotation}
- B66D 1/225 {variable ratio or reversing gearing (fixed ratio gearing [B66D 1/22](#))}
- B66D 1/24 . . . for varying speed or reversing direction of rotation of drums or barrels {i.e. variable ratio or reversing gearing ([B66D 1/225](#) takes precedence)}
- B66D 1/26 . . having several drums or barrels
- B66D 1/28 . . Other constructional details
- B66D 1/30 . . Rope, cable, or chain drums or barrels
- B66D 1/34 . . . Attachment of ropes or cables to drums or barrels
- B66D 1/36 . . Guiding, or otherwise ensuring winding in an orderly manner, of ropes, cables, or chains
- B66D 1/365 . . . {by means of pivotably mounted drums or barrels}
- B66D 1/38 . . . by means of guides movable relative to drum or barrel
- B66D 1/39 . . . by means of axially-movable drums or barrels {(pivotably mounted drums or barrel [B66D 1/365](#))}
- B66D 1/40 . . Control devices
- B66D 1/42 . . . non-automatic
- B66D 1/44 pneumatic or hydraulic
- B66D 1/46 electric
- B66D 1/48 . . . automatic
- B66D 1/485 {electrical}
- B66D 1/50 for maintaining predetermined rope, cable, or chain tension, e.g. in ropes or cables for towing craft, in chains for anchors; Winding or mooring winch-cable tension control
- B66D 1/505 {electrical}
- B66D 1/52 for varying rope or cable tension, e.g. when recovering craft from water
- B66D 1/525 {electrical}
- B66D 1/54 . . Safety gear
- B66D 1/56 . . Adaptations of limit switches
- B66D 1/58 . . responsive to excess of load
- B66D 1/60 . . adapted for special purposes
- B66D 1/605 . . {scaffolding winches ([B66D 1/74](#) takes precedence)}
- B66D 1/62 . . for actuating grab buckets (electrical control in cranes [B66C 13/32](#))
- B66D 1/64 . . . by means of a single rope or chain
- B66D 1/66 . . . driven by a single motor
- B66D 1/68 . . . driven by two motors
- B66D 1/70 . . . driven through planetary or differential gearings
- B66D 1/72 . . Anchor-chain sprockets; Anchor capstans
- B66D 1/74 . . Capstans
- B66D 1/7405 . . . {having two or more drums providing tractive force}
- B66D 1/741 {and having rope storing means}
- B66D 1/7415 . . . {Friction drives, e.g. pulleys, having a cable winding angle of less than 360

- degrees}
- B66D 1/7421 . . . { having a vertical rotation axis}
- B66D 1/7426 { driven by motor only}
- B66D 1/7431 { driven manually only}
- B66D 1/7436 { drivable by both motor and manually}
- B66D 1/7442 . . . { having a horizontal rotation axis}
- B66D 1/7447 { driven by motor only}
- B66D 1/7452 { driven manually only}
- B66D 1/7457 { drivable by both motor and manually}
- B66D 1/7463 . . . { Accessories}
- B66D 1/7468 { Handles}
- B66D 1/7473 { with locking means}
- B66D 1/7478 { Powered handles}
- B66D 1/7484 . . . { Details concerning gearing arrangements, e.g. multi-speed}
- B66D 1/7489 . . . { having a particular use, e.g. rope ascenders}
- B66D 1/7494 . . . { Self-tailing capstans}
- B66D 1/76 . . . having auxiliary drums or barrels for storing the ropes or cables
- B66D 1/78 . . . for shunting, e.g. in marshalling yards
- B66D 1/80 . . for scrapers
- B66D 1/82 . . for slewing and hoisting by means of derricks

B66D 3/00 Portable or mobile lifting or hauling appliances

- B66D 3/003 . {using two or more cooperating endless chains}
- B66D 3/006 . {Power actuated devices operating on ropes, cables, or chains for hauling in a mainly horizontal direction ([B66D 3/003](#) takes precedence)}
- B66D 3/02 . Manually-operated, e.g. lever-actuated, devices operating on ropes, cables, or chains for hauling in a mainly horizontal direction ([B66D 3/04](#), [B66D 3/12](#) take precedence)
- B66D 3/04 . Pulley blocks or like devices in which force is applied to a rope, cable, or chain which passes over one or more pulleys, e.g. to obtain mechanical advantage ([sheaves F16H 55/00](#))
- B66D 3/043 . . {Block and tackle system with variable number of cable parts}
- B66D 3/046 . . {Openable pulley blocks}
- B66D 3/06 . . with more than one pulley
- B66D 3/08 . . . Arrangements of sheaves
- B66D 3/10 . . . Applications of braking or detent devices
- B66D 3/12 . Chain or like hand-operated tackles with or without power transmission gearing between operating member and lifting rope, chain or cable
- B66D 3/14 . . lever operated
- B66D 3/16 . . operated by an endless chain passing over a pulley or a sprocket

- B66D 3/18 . Power-operated hoists
- B66D 3/20 .. with driving motor, e.g. electric motor, and drum or barrel contained in a common housing
- B66D 3/22 ... with variable-speed gearings between driving motor and drum or barrel
- B66D 3/24 .. Applications of limit switches
- B66D 3/26 .. Other details, e.g. housings

B66D 5/00 **Braking or detent devices characterised by application to lifting or hoisting gear, e.g. for controlling the lowering of loads (for pulley blocks [B66D 3/10](#))**

- B66D 5/02 . Crane, lift hoist, or winch brakes operating on drums, barrels, or ropes
- B66D 5/023 .. {Cooling of brakes (in general [F16D](#))}
- B66D 5/026 .. {Fluid-resistance brakes}
- B66D 5/04 .. actuated by centrifugal force
- B66D 5/06 .. with radial effect ([B66D 5/20](#) takes precedence)
- B66D 5/08 ... embodying blocks or shoes
- B66D 5/10 ... embodying bands
- B66D 5/12 .. with axial effect ([B66D 5/22](#) takes precedence)
- B66D 5/14 ... embodying discs
- B66D 5/16 .. for action on ropes or cables
- B66D 5/18 .. for generating braking forces which are proportional to the loads suspended;
Load-actuated brakes
 - B66D 5/20 ... with radial effect
 - B66D 5/22 ... with axial effect
- B66D 5/24 .. Operating devices
 - B66D 5/26 ... pneumatic or hydraulic
 - B66D 5/28 specially adapted for winding gear, e.g. in mining hoists
 - B66D 5/30 ... electrical
- B66D 5/32 . Detent devices
- B66D 5/34 .. having latches

B66D 2700/00 **Capstans, winches or hoists**

- B66D 2700/01 . Winches, capstans or pivots
- B66D 2700/0108 .. with devices for paying out or automatically tightening the cable
- B66D 2700/0116 .. Manually or spring operated winches
- B66D 2700/0125 .. Motor operated winches
 - B66D 2700/0133 ... Fluid actuated
 - B66D 2700/0141 ... Electrically actuated
 - B66D 2700/015 ... Actuated by chain, belt or by friction

- B66D 2700/0158 . . . Hydraulically controlled couplings or gearings
- B66D 2700/0166 . . . Winches with multiple drums or with drums with multiple parts of different diameter
- B66D 2700/0175 with adjacent drums mounted on a single shaft with a common coupling member
- B66D 2700/0183 . . Details, e.g. winch drums, cooling, bearings, mounting, base structures, cable guiding or attachment of the cable to the drum
- B66D 2700/0191 . . . Cable guiding during winding or paying out
- B66D 2700/02 . Hoists or accessories for hoists
- B66D 2700/021 . . Hauling devices
- B66D 2700/023 . . Hoists
- B66D 2700/025 . . . motor operated
- B66D 2700/026 . . Pulleys, sheaves, pulley blocks or their mounting
- B66D 2700/028 . . . Pulley blocks with multiple sheaves
- B66D 2700/03 . Mechanisms with latches or braking devices in general for capstans, hoists or similar devices as well as braking devices actuated electrically or by fluid under pressure
- B66D 2700/035 . . Fluid operated braking devices
- B66D 2700/05 . Brakes with mechanisms with latches for hoists or similar devices
- B66D 2700/07 . Brakes with axial thrust for winches, hoists or similar devices